

CHICAGO **welding**
ELECTRIC **systems**

SPOT WELDER

Model 98759

SET UP AND OPERATING INSTRUCTIONS



Distributed exclusively by Harbor Freight Tools®.

3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

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For technical questions or replacement parts, please call 1-800-444-3353.

SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

General Power Tool Safety Warnings



WARNING Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference. The term "power tool" in the warnings refers to your corded power tool.

1. **Work area safety**
 - a. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
 - b. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
 - c. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.
2. **Electrical safety**
 - a. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.

- b. **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
 - c. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
 - d. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
 - e. **If operating a power tool in a damp location is unavoidable, use a Ground Fault Circuit Interrupter (GFCI) protected supply.** *Use of a GFCI reduces the risk of electric shock.*
3. **Personal safety**
- a. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating power tools may result in serious personal injury.*
 - b. **Use personal protective equipment. Always wear eye protection.** *Safety equipment such as welding mask, non-skid safety shoes, and welding apron used for appropriate conditions will reduce personal injuries.*
 - c. **Prevent unintentional starting. Ensure the switch of the stick welder is in the off-position before connecting to power source, picking up or carrying the tool.**
4. **Power tool use and care**
- d. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
 - e. **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** *Loose clothes, jewelry or long hair can be caught in moving parts.*
 - f. **Only use safety equipment that has been approved by an appropriate standards agency.** *Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.*
- a. **Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.*
 - b. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*
 - c. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are*

caused by poorly maintained power tools.

- d. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*

5. **Service**

- a. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** *This will ensure that the safety of the power tool is maintained.*

Spot Welder Safety Warnings

1. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. Avoid unintentional starting. Prepare to begin work before turning on the tool.
3. Rest the tool and connection to the electrode holder on a properly insulated surface.
4. Do not leave the tool unattended when it is plugged into an electrical outlet. Turn off the tool, and unplug it from the welder before leaving.
5. This product is not a toy. Keep it out of reach of children.
6. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker

er failure. In addition, people with pacemakers should:

- Avoid operating alone.
- Do not use with power switch locked on.
- Properly maintain and inspect to avoid electrical shock.
- Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.

7. **WARNING:** The brass components of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). (California Health & Safety code § 25249.5, *et seq.*)
8. Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead-based paints
 - Crystalline silica from bricks and cement or other masonry products
 - Arsenic and chromium from chemically treated lumberYour risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)
9. **WARNING:** Handling the cord on this product will expose you to lead, a chemical known to the State of

California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, et seq.)

10. Do not exceed input amperage of 50 Amps.
11. Follow all directions provided in the manual of the ARC (stick) welder used with this product.
12. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Electrical Safety

1. Avoid electrical shock. Do not permit electrically live parts, cables, or electrodes to contact skin, clothing, or gloves. Wear ANSI-approved protective clothing. This unit draws enough current to cause serious injury or death. Before turning the welder on, check the electrode holder to be sure that there are no protruding screws, and that all insulation is secure. Do not weld unless you are insulated from ground and the work piece.
2. Avoid eye and body damage. Arc rays and infrared radiation can injure eyes and burn skin. Wear ANSI approved eye and body protection. Do not allow viewing by visitors without proper eye and body protection. Use a welding helmet with #11 lens and arc shaded filter plate.

3.



Prevent accidental fires. Remove any combustible material from the work area. Move flammable and explosive material at

least 35 feet from the welding arc to prevent welding sparks or molten metal from starting a fire. Keep a type ABC fire extinguisher within easy reach. Thoroughly clean the object being welded of any paint, grease, or other foreign material.

4.

If working on a wall or ceiling prevent ignition of combustibles on the other side by moving them to a safe location.

5.

Industrial applications must follow OSHA guidelines. Follow OSHA guidelines for Permissible Exposure Limits (PEL's) for various fumes and gases.

6.



Prevent eye injury and burns. Wearing and using ANSI-approved personal safety clothing and safety devices reduce the risk for injury.

7.

Leather leggings, fire resistant shoes or boots should be worn when using this product. Do not wear pants with cuffs, shirts with open pockets, or any clothing that can catch and hold molten metal or sparks.

8.

Keep clothing and work surfaces free of grease, oil, solvents, or any flammable substances. Wear dry, insulating gloves and protective clothing.

9.

Wear an approved head covering to protect the head and neck. Use aprons, cape, sleeves, shoulder covers, and bibs designed and approved for welding and cutting procedures.

10. When welding/cutting overhead or in confined spaces, wear flame resistant ear plugs or ear muffs to keep sparks out of ears.
11. Do not use near degreasing or painting operations.
12. Enclose the work area with portable fire resistant screens. Protect combustible walls, ceilings, floors, etc., from sparks and heat with fire resistant covers.
13. Do not weld sealed containers. All containers should be considered unsafe unless they have been declared safe by a qualified person.
14. Use a non-conductive safety mat on the work surface to insulate the operator from the work surface.
15. Read the directions for the stick welder that the Spot Welder will be connected to.



**SAVE THESE
INSTRUCTIONS.**

SPECIFICATIONS

Input	35 to 50 Amps
Material Range	18 Gauge Maximum
Electrode Size	5-7/8" L x 0.279" D (2 included)
Weld Time	2 to 3 Seconds

UNPACKING

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at 1-800-444-3353 as soon as possible.

OPERATING INSTRUCTIONS



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Tool Set Up



WARNING TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn the Power Switch of the ARC welder to its "OFF" position and unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

Work Piece and Work Area Set Up

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent injury and distraction.

2. Route the power cord along a safe route to reach the work area without creating a tripping hazard or exposing the power cord to possible damage. The power cord must reach the work area with enough extra length to allow free movement while working.
3. Secure loose work pieces using a vise or clamps (not included) to prevent movement while working.
4. There must not be hazardous objects, such as utility lines or foreign objects, nearby that will present a hazard while working.

General Operating Instructions



DANGER TO PREVENT DEATH OR SERIOUS INJURY:
Do not touch any metal part of the Spot welder when it is powered.

1. Read the manual for the ARC (stick) welder that is being used to power the Spot Welder.
2. If welding on a vehicle; disconnect the vehicle's battery.
3. Clean the work thoroughly before beginning operation. Remove all grease, paint, and oil from the work-piece.
4. Wear protective gear whenever welding.
5. Choose the Welding Head that suits the needs of the job best. The Two Prong Head (1) is best suited for welding inside corners and on curved surfaces. The Four Prong Head (2) is best suited for welding on flat surfaces. Twist the correct welding head

- for the job onto the end of the Spot Welder firmly.
6. Insert one of the included electrodes (16) and tighten the Lock Screw (12) to fix the electrode in place.
 7. Clamp the electrode holder of the ARC welder onto the Connection (15) of the Spot Welder.
 8. Adjust the output to no greater than 50 Amps.
 9. **⚠ DANGER! To prevent serious injury and death. If the operator is not holding the Spot Welder, it must be sitting on a nonconductive, nonflammable surface. The Spot Welder will immediately turn on when the power button is turned on. The connection between the Spot Welder and the electrode clamp of the ARC welder must also be sitting on a nonconductive, nonflammable surface.**
 10. Turn on the ARC welder.
 11. Pull the Trigger all the way back and touch the prongs to the workpiece.
 12. Release the trigger slowly until it connects the workpiece, then pull the trigger back about 1/16". The arc will be ignited. The weld should take two to three seconds to complete.
 13. Pull the trigger all the way back to break the arc.
 14. Allow the Spot Welder to cool down after ten welds.
 15. When finished welding; lift the electrode from the workpiece, discharge the electrode to ground and turn the Welder off. Disconnect the Spot Welder from its power source.
 16. Place the Spot Welder down on a nonflammable, nonconductive surface to cool.
 17. To prevent accidents, disconnect the Spot Welder from the ARC welder after use. Clean, then store the tool indoors out of children's reach.

TROUBLESHOOTING

Symptom	Cause	Solution
Weld does not occur.	<ol style="list-style-type: none"> 1. Unit not plugged in. 2. Blown fuse or circuit breaker. 	<ol style="list-style-type: none"> 1. Plug Power Cord into electrical outlet. 2. Replace fuse or reset circuit breaker.
Weld not strong/deep enough.	<ol style="list-style-type: none"> 1. Electrode dirty or oxidized. 2. Poor contact with metals. 3. Electrode holder dirty or oxidized. 	<ol style="list-style-type: none"> 1. Clean or replace Electrode. 2. Press harder against workpiece/. 3. Clean area with copper cleaner and fine wet-dry sandpaper.
Longer than normal weld time required.	<ol style="list-style-type: none"> 1. Metals to be welded are dirty. 2. Electrode dirty, oxidized, or pitted. 3. Nuts on Conductors loose. 4. Facility line voltage low. 	<ol style="list-style-type: none"> 1. Clean metals with fine wet-dry sandpaper. 2. Clean, resurface, or replace Electrode. 3. Tighten nuts. 4. Check line voltage with voltmeter.
Burn through at weld point.	<ol style="list-style-type: none"> 1. Weld time too long. 2. Electrode dirty, oxidized, or pitted. 	<ol style="list-style-type: none"> 1. Shorten weld time. 2. Clean, resurface, or replace Electrode.

MAINTENANCE AND SERVICING



Procedures not specifically explained in this manual must be performed only by a qualified technician.

⚠️ WARNING

TO PREVENT SERIOUS INJURY

FROM ACCIDENTAL OPERATION:

Turn the Power Switch of the ARC welder to its “OFF” position and unplug the tool from the electrode clamp before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Cleaning, Maintenance, and Lubrication

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
2. **AFTER USE**, clean external surfaces of the tool with clean cloth.
3. **⚠️ WARNING!** If the supply cord of this power tool is damaged, it must

be replaced only by a qualified service technician.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

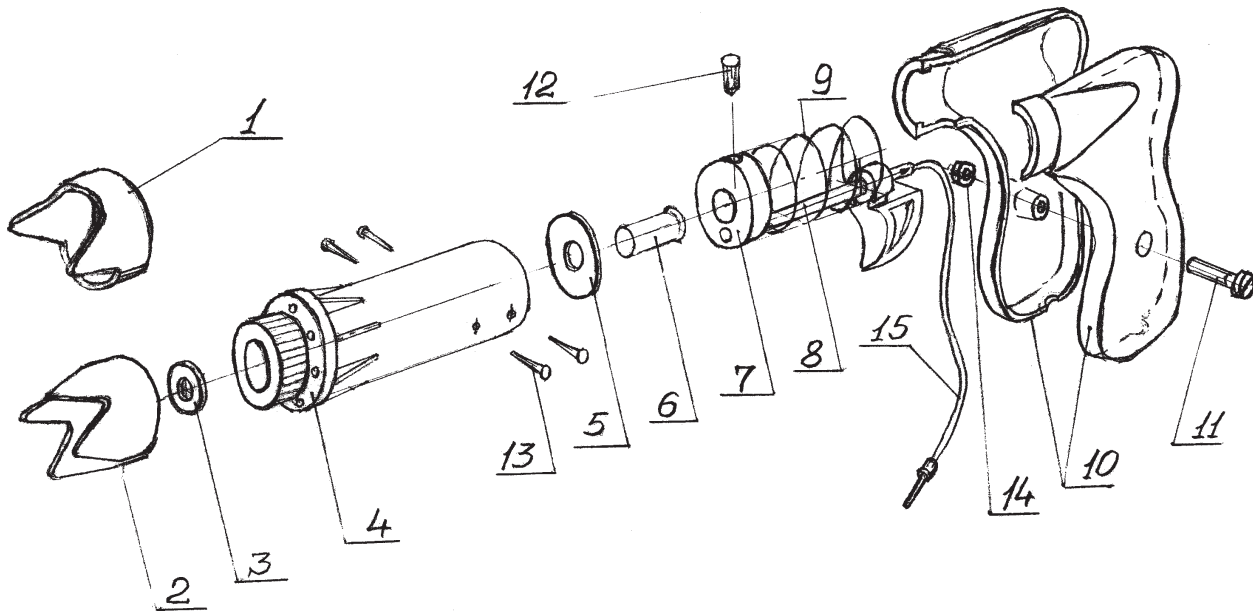
PARTS LIST

Part	Description	Qty.
1	Welding Head - Two Prong	1
2	Welding Head - Four Prong	1
3	Washer	1
4	Case	1
5	Washer	1
6	Tube	1
7	Piston	1
8	Axis Assembly	1

PARTS LIST

Part	Description	Qty.
9	Spring	1
10	Frame Handle	1
11	Screw M4x22	1
12	Lock Screw M5x10	1
13	Screw M4x12	4
14	Nut M4	1
15	Connection	1
16	Electrode (not shown)	2

DIAGRAM



Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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